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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/930,807	08/15/2001	Daniel Price	SUN1P746/P6332	3576
22434	7590	01/13/2006	EXAMINER	
BEYER WEAVER & THOMAS LLP			VO, TED T	
P.O. BOX 70250			ART UNIT	
OAKLAND, CA 94612-0250			PAPER NUMBER	
			2191	

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/930,807	PRICE ET AL.	
	Examiner	Art Unit	
	Ted T. Vo	2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-14,17 and 20-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-14,17 and 20-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 8/15/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment filed on 10/14/2005.
Claims 1, 4-14, 17, 20-24 are pending in the application.

Response to Arguments

2. Applicants' arguments to the rejections have been fully considered, but not persuasive. The arguments are moot because the Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4-14, 17, 20-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Silberschatz et al., "Operating System Concepts - Module 21: The Unix System",
<http://www.cse.ucsc.edu/~sbrandt/courses/Spring01/111/slides/mod21.1.pdf>, 1999.

Given the broadest reasonable interpretation of followed claims in light of the specification.

As per Claim 1:

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Silberschatz shows a series of slides that include a process control to describe the claimed limitations, the process control covers,

"A computer-implemented method for a running parent process to collect exit information from a defunct child process associated with the running parent process, the computer-implemented method comprising:

identifying a parent process associated with the defunct child process (See slide 21.11, second bullet); and

modifying the running parent process associated with the defunct child process by creating an agent thread inside the running parent process, the agent thread being operable to force the running parent process to collect exit information for the defunct child process (See slide 21.11, third bullet; further refer to the fourth and fifth indentations '-' : collect exit information),

thereby enabling the collection of exit information for the defunct child process associated the running parent process without terminating the running parent process (process control shown in slides, 21.11 and 21.12 will cause the shell process of slide 21.12 running (Refer to the fourth bullet in the slide 21.11)).

As per Claim 4: Silberschatz further discloses *The computer-implemented method of claim 1, wherein modifying the parent process comprises altering the parent process to invoke wait() or waitpid() (See slide 21.11 third bullet, "wait3" or slide 21.12 "wait").*

As per Claim 5: Silberschatz further discloses, *The computer-implemented method of claim 1, wherein a control criterion is used to determine whether to modify the parent process (See slide 21.11, third bullet).*

As per Claim 6: Silberschatz further discloses, *The computer-implemented method of claim 5, wherein the control criterion comprises determining whether the parent process is stopped (See slide 21.11, third bullet, third indentation '-').*

As per Claim 7: Silberschatz further discloses, *The computer-implemented method of claim 6, wherein the control criterion comprises determining whether the defunct process is a newly defunct process, wherein the parent is modified only if it is determined that the defunct process is not a newly defunct process (See slide 21.11, third bullet).*

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As per Claim 8: Silberschatz further discloses, *The computer-implemented method of claim 6, wherein the control criterion comprises determining that the parent process is not an initial process (Further see slide 21.13, the process includes descendants and original process (init process)).*

As per Claim 9: Silberschatz discloses, *A computer-implemented method for reaping a defunct child process associated with a parent process, the computer-implemented method comprising: identifying a defunct child process; attaching an agent thread to a parent process to allow modification of the parent process, wherein the parent process is modified to reap the defunct child process. (See slides 21.11 and 21.12).*

As per Claim 10: Silberschatz further discloses, *The computer-implemented method of claim 9, wherein a control criterion is used to determine whether to modify the parent process.*

See rationale addressed in Claim 5.

As per Claim 11: Silberschatz further discloses, *The computer-implemented method of claim 10, wherein the control criterion comprises determining whether the parent process is stopped.*

See rationale addressed in Claim 6.

As per Claim 12: Silberschatz further discloses, *The computer-implemented method of claim 10, wherein the control criterion comprises determining whether the defunct process is a newly defunct process, wherein the parent is modified only if it is determined that the defunct process is not a newly defunct process. See rationale addressed in Claim 7.*

As per Claim 13: Silberschatz further discloses, *The computer-implemented method of claim 10, wherein the control criterion comprises determining that the parent process is not an initial process.*

See rationale addressed in Claim 8.

As per Claim 14: Silberschatz discloses, *The computer program product comprising computer code for a running parent process to collect exit information from a child process, the child process associated with a nonterminated parent process, the computer program product comprising: computer code for identifying a parent process associated with a defunct child process; and computer code for modifying the parent process associated with the defunct child process, wherein modifying the parent process allows the parent process to collect exit information associated with the defunct child process.*

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See slides 21.11 and 21.12.

As per Claim 17: Silberschatz discloses, *An apparatus for a running parent process to collect exit information from a child process, the child process associated with a nonterminated parent process, the apparatus comprising: means for identifying a parent process associated with a defunct child process; and means for modifying the parent process associated with the defunct child process, wherein modifying the parent process allows the parent process to collect exit information associated with the defunct child process.* See slides 21.11 and 21.12.

As per Claim 20: Silberschatz discloses, *An apparatus for reaping a defunct child process associated with a parent process, the apparatus comprising: memory; a processor coupled to memory, the processor configured to identify a defunct child process and attach an agent thread to a parent process to allow modification of the parent process, wherein the parent process is modified to reap the defunct child process.* See slides 21.11 and 21.12.

As per Claim 21: Silberschatz further discloses, *The apparatus of claim 20, wherein a control criterion is used to determine whether to modify the parent process.* See rationale addressed in Claim 5.

As per Claim 22: Silberschatz further discloses, *The apparatus of claim 21, wherein the control criterion comprises determining whether the parent process is stopped.* See rationale addressed in Claim 6.

As per Claim 23: Silberschatz further discloses, *The apparatus of claim 21, wherein the control criterion comprises determining whether the defunct process is a newly defunct process, wherein the parent is modified only if it is determined that the defunct process is not a newly defunct process.* See rationale addressed in Claim 7.

As per Claim 24: Silberschatz further discloses, *The apparatus of claim 21, wherein the control criterion comprises determining that the parent process is not an initial process.*

See rationale addressed in Claim 8.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Randolph Herber, "UNIX System V (Concepts)", <http://www-cdf.fnal.gov/>, pages: 1-3, 1997.

John Bell, "Zombie processes, and What to do about them...", Archive message -

http://www.kclug.org/old_archives/linux-activists/1993/, pages: 1-2, 1993.

Ritchie et al., "The UNIX Time-Sharing System", ACM, pages: 365-375, 7-1974.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted T. Vo whose telephone number is (571) 272-3706. The examiner can normally be reached on 8:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708.

The facsimile number for the organization where this application or proceeding is assigned is the Central Facsimile number **571-273-8300**.

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Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ted T. Vo
Primary Examiner
Art Unit 2191
January 06, 2006